National Aeronautics and Space Administration

Code 750 Enterprise Solutions Division

Standard Operating Procedures

For

Project, Configuration, and Document/Records Management

Addendum A.1

March 21, 2014

Change History Log

List of Effective Pages		
Section / Page #	**Ver.**	**Nature of Change**
Entire document	0.3	Reformatted procedures tables
Entire document	"	Inserted note for documents – PDD and DDD i.e., these documents will be utilized on a case by case basis
Section 1.5, pp. 6-9	"	Updated/added team roles
Section 2.2, page 9	"	Moved section 2.2 table to *Appendix F*
Section 3, pp. 10-11	"	Added CCB to Code 750 Project Categories (table)
Section 3, pp. 13-29	"	Added/refined steps for Project Planning, Requirements Management, Document/Records Management, Testing, and Hardware/ Software Delivery
Appendix B	"	Updated contact list for Code 750 team
Appendix C	"	Added current SR process workflow based on Code 750 internal process meetings (Sept through Oct 2012)
Appendix D	"	*Proposed* Code 700 Help Desk job aid to identify a change request and incidents
Appendix E	"	Updated Code 750 artifacts (templates)
Section 2.1 (new)	0.4	Added Document Content
Entire document	"	*Proposed* **timeframes** by which Code 750 key personnel and others impacted by a project or CR should complete tasks.
Section 3.1	"	Introduced *application solution package* to Project Planning procedures
Section 3.1	"	Introduced routing sheet to *Project Planning procedures*
Section 3.1, 3.6	"	Updated procedures – Project Planning and Change Management
Section 3.6	"	Updated language for Change Management procedures
Section 3.6	"	Changed term 'service' request to 'change' request under Change Mgmt. procedures.
Section 4.1.2	"	Updated *Procedures for Code 750 Document/Records Management*
Appendix A	"	Included acronyms – Change Request (CR), Incident (INC), and category (CAT)
Appendix C	"	Renamed Appendix C and updated Code 750 *project* process work flow
Entire document	0.5	Changed all reference to the Doc. Control Admin to Configurations. Manager
Appendix C	"	Updated process workflows
Section 1.5	"	Updated *Roles and Responsibilities*
Section 3.1	"	Added step 1.2.1.1 - Discussion environment setup requirements for DEV and TEST environments in support of the proposed initiative.
Section 3.1	"	Replaced reference to BRD with appropriate requirements artifacts e.g., RQD and BCAR.
Section 3.1	"	Updated *Project Planning* procedures to include the identification of (development and test) environments during Formulation phase and as part of the App. Solution Package.
Section 3.1	"	Revised *Project Planning* procedures to include initiating CR for projects
Section 3.3	"	Updated Requirements Management Procedures
Section 3.4	"	Added PIA and STRAW as tasks under Application Development Process Procedures, and added language related to platform changes
Section 3.5.3	"	Section 508 Testing procedures including timeframes
Section 4.2	"	Revised Hardware/Software Delivery Procedures
Appendix A	"	Added acronyms: CCB, LOE, PIA, STRAW, PM
Appendix C	"	Update business process workflow to includes activity timeframes
Appendix D	"	Updated Support Desk checklist (proposal) per Support Task Manager
Appendix E	"	Included Customer signature block in project document templates
Appendix G	"	Added Appendix G *Code 750 Project Schedule Template*
Project Cat table	"	Added CR as deliverable for project cats A, B, C; and added note for Project Category D
Entire document	"	Defined CAB (Change Advisory Board) role in process, and defined SR process
Appendix C Section 1.4 Section 3.1	1.0	Updated process workflows Updated section with more descriptive information on project artifacts Update Project Planning steps – routing sheet
Step 7.3.2		Updated CR step
Step 7.5.1		Included ORR checklist
Section 3.5	A.1	Updated to test planning/execution

Change History Log *cont'd*

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1. INTRODUCTION

The Enterprise Solutions Division (ESD) Code 750 recognizing the necessity of implementing and maintaining a stable baseline for all project, configuration, and document/records management activities. As such, ESD has leveraged the CM approach developed by Code 760 to support Federal, NASA, and GSFC policy, requirements, and guidelines that align with the organizational goals and objectives of Code 750. This document details these policies and procedures to which Code 750 will adhere going forward.

1.1 Purpose

The purpose of these standard operating procedures is to provide principles authorized by NASA guidelines that can be integrated seamlessly into the Enterprise Solutions Division to support its application enterprise and its customer base by:

- *Operationalizing* Code 750 documents such as plans, regulation, compliance, and policies
- Managing of each milestone within the ESD software development life cycle for Institutional and Reimbursable projects
- Analyzing, capturing, and implementing customer requirements in support of new / enhanced applications
- Adhering to Change Management standards to better facilitate incidents and change requests
- Enhancing communication with customers, stakeholders and end users
- Promoting a Configurations Management standard for document management and control and hardware/software delivery

This SOP details the procedure for each of the above areas, identifies the roles and responsibilities of key personnel tasked with following, managing and/or implementing the procedure, and presents justification for the procedure / policy being established.

1.2 Authority

The authority or guiding document would be - NPR 7120.7. *NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements*, November 2008.

1.3 Scope

This SOP mirrors the policies and procedures designed by Code 760 in accordance with NASA procedural requirements for project management. The SOP applies to the management and staff of the Enterprise Solutions Division, Code 750. Note that all initial 'project' efforts including Data Center activities should adhere to this SOP. Maintenance an application, environment, etc. falls outside the guidelines of this SOP.

1.4 Applicable Documents

The following are reference materials leveraged to craft the Code 750 standard operating procedures:

- NASA Procedural Requirement (NPR) 7120.7 NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements, November 2008
- NPR 1441.1D NASA Records Retention Schedules
- NASA Special Publication (SP) 2007-6105 NASA Systems Engineering Handbook
- Remedy Service Management
- Code 750 has adopted the following Code 760 document templates for use in the Code 750 process. The project documents have been modified to fit with Code 750 application development. All project documents are available on the *Application Development* SharePoint https://itcdsp.gsfc.nasa.gov/appdev/Shared%20Documents/Forms/AllItems.aspx :

    - Project/Task Plan (PTP)
    - Business Case Analysis Report (BCAR). Intended for projects that require evaluation of a number of technical options
    - Project/Task Scope Document (SCP)
    - Requirements Traceability Matrix (RTM)
    - Requirements Document (RQD). Intended for projects with only one solution to support the requirements detailed in this artifact
    - Test Plan (TP)
    - Preliminary Design Document (PDD) – *To be used on a case-by-case basis*
    - Detailed Design Document (DDD) - *To be used on a case-b- case basis*
    - Implementation Plan (IMP)

1.5 Roles and Responsibilities

The roles and responsibilities of member of the Code 750 staff in support of standard operating procedures are below. The primary points of contact for Code 750 are in *Appendix B Enterprise Solutions Division POCs.*

(A) The Code 750 Division Chief will:

- Review application development efforts under consideration and approve new initiatives based on an established set of criteria i.e., budget costs, timeline, technology requirements, recommendations, and customer needs.
- Approve new technology, hardware, and software proposed to enhance the GSFC enterprise.
- Encourage the adherence to the guidelines set forth in this SOP.

(B) The Project Manager (PM)/Task Lead (TL)/Task Monitor (TM)* will:

- Code 750 Civil Servant
- Primary point of contact between Code 750 and Customer
- Present project proposals to the Code 750 Division Chief for consideration
- Manage the full project life cycle for new application initiatives

- Manage the project schedules and provide all status of changes to the project schedule to the primary stakeholder.
- Coordinate Code 750 staff (e.g., analysis, development, test, configurations management, implementation, etc.) to project milestones, ensuring timely and accurate delivery
- Report the state of projects, risks, issues, and changes to Code 750 executives
- Code 750's first line of communication with stakeholders / user groups seeking new and enhancements to existing applications
- Work with SMEs to devise technical alternatives that seek to modernize the enterprise architecture, promote reuse of data, streamline repeatable, and business processes
- Be responsible for utilizing Code 750 Project/Task, Configuration, and Document/Records Management standards, documentation templates, and services when managing project and tasks
- Be accountable to Code 750 executive team for ensuring that personnel supporting their assigned projects utilize approved standards, documentation templates, and services e.g., document repository
- Consults with Code 750 management (and other parties as applicable) on proposed improvements to existing Code 750 processes and procedures
- Keep abreast of any issues regarding compliance with the use of Code 750 standards, processes, document templates or services by members of their teams

**Note that whether the project type is Institutional, Reimbursable or Mission, the role of the PM/TL remains the same.*

(C) The Project Team will:

- Consist of key personnel accountable for the project milestones and tasks at various phases of and throughout the project life cycle
- Include the Customer, Code 750 Task Lead, Development Task Lead (as needed for project kickoff and delivery of cost estimate/LOE), Business Analyst, Data Center Manager (as needed during reviews – SCR and ORR), Operations Manager (as needed during reviews – SCR and ORR), QA/Section 508 testers (as needed as part of KDP entry criteria to Test phase), CCB, and the CAB

(D) The Data Center Manager will:

- Review *Application Solution Package* and sign routing sheet for new application initiatives
- First line of communication with stakeholders / user groups seeking Data Center hosting options
- Work with Data Center staff to devise technical alternatives that seek to modernize the enterprise architecture
- Manage the full project life cycle for new, *Data Center* initiatives e.g., Remedy, Container

(E) The Policy Lead will:

- Be responsible for defining and directing the overall approach to Project, Configuration, and Document/Records Management in their respective area
- Be accountable to NASA, GSFC senior management for compliance with Federal, NASA, GSFC, Code 750 policy, requirements, and guidelines
- Consults with NASA, GSFC senior management on any matters that may impact the overall approach or integrity of the Code 750 Project, Configuration, and Document/Records Management processes and procedures
- Keep abreast of any required or proposed changes to Code 750 Project/Task, Configuration, and Document/Records Management processes and procedures for direction, guidance or approval

(F) The Business Analyst will:

- Prepare all project artifacts which include, but is not limited to, PTP, SCP, and BCAR
- Conduct requirements review sessions with stakeholders where requirements are captured and documented in an RTM
- Craft and distribute meeting minutes for all project meetings e.g., reviews and milestone checkpoints
- Track all requirements and updated RTM accordingly
- Prepare and upkeep schedules for 'approved' project
- Address all actions with project resources following project status meetings
- Work with the Configuration Manager to ensure doc/records management repository (SharePoint) is kept current

(G) The QA (Quality Assurance) Tester will:

- Work with the development team to ensure all issues from code/unit testing and system integration test are addressed prior to start of QA.
- Use updated (based on test results from unit test/SI test) test plan to conduct QA testing within the timeframe dictated in the project schedule
- Document all QA test results
- Advise on any problems that would impact established, project test schedule
- Work with stakeholder/user groups that will be involved in UAT to ensure an understanding of functionality slated for user acceptance testing prior to start of UAT
- Adhere to all CM guidelines relative to documentation/records management

(H) The Section 508 Tester will:

- Provide feedback to the development team on any requirements relate to Section 508 in order to ensure compliancy
- Address any issues related to compliancy based on Section 508 checklist
- Adhere to Code 750 standards specifically related to processes and procedures for testing
- Adhere to all CM guidelines relative to documentation/records management

(I) The Task Monitor (TM)/Program Manager (PM) will:

- Review, approves, disapproves change requests (CRs) in the Remedy Service Management system for new applications and enhancements to existing applications

(J) The Configurations Manager will:

- Adhere to all CM guidelines relative to documentation/records management
- Be responsible for maintaining the SharePoint repository containing Code 750 all project-level documentation
- Provide version control for all Code 750 project documentation that resides in the appointed document repository i.e., SharePoint
- Organize SharePoint site folders in support of dynamic records management
- Consult with authors of Code 750 documentation to ensure proper placement of *draft* and *approved* artifacts in the repository
- Recommend to Code 750 Task Leads any changes to document repository that could more effectively promote CM standards

(K) The Code 700 Support Desk Task Manager will:

- Direct activities for the Code 700 Support Desk staff

(L) The Contractor Task Lead (TL) will:

- Prioritize and assign (development) work for change requests initiated by a Customer
- Submit to requests for cost estimates and level of effort on new application initiatives and change requests
- Enters cost estimates in Remedy for CRs
- Support concept meetings and project status meetings as needed
- Provide project schedules for those design, development and testing tasks for which the Contractor is directly responsible
- Ensure incidents are addressed by development staff in timely fashion

(M) Development team that provides app dev. services in support of Code 750 initiatives will:

- Adhere to the Code 750 standards specifically related to processes and procedures for application development and testing
- Deliver timely and accurate artifacts e.g., design document, test scenarios/plans, cost estimates/LOE, architectural solutions to address requirements for new applications and enhancements to existing applications
- Provide appropriate staff to provide input to technical solution, and perform design, code, development, and unit test in support of an application development effort.

(N) CAB (Change Advisory Board) will:

- Introduces to Code 750 key personnel CRs for major initiatives including new application development efforts, products, or services. Only re-introduces projects in CAB meeting if new information/requirements impact the original cost estimate or project schedule.

- Participate in review of implementation plans of new initiatives as part of ORR.

(O) CCB (Configuration Control Board) is:

- Responsible for maintaining, developing and controlling the network strategy within the IT organization

2 SOP ORGANIZATION

2.1 Document Content

As described in section 2.2, the format of the new and enhanced processes and procedures by which Code 750 will follow are formatted the same throughout this document. Moreover, *Appendix C - Business Process Flow for Code 750 Project Categories* illustrates how the Code 750 personnel will carry out the procedures described throughout this document for each Code project category i.e., A, B, C, D, and E.

2.2 Document Format

Each of the SOP sections to follow will detail *standards* for each Code 750 area i.e., Project, Configuration, and Document Management. The format will be as follows:

Procedures for Code 750 Project Planning											
Step	**<Process Name>**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
1	Primary step										
1.1	Inter-rated sub step										

2.3 Addressing Anomalies

Where possible, Code 750 standards mimic that of the Code 760 process. There is, however, uniqueness in some areas such as the handling of 'change requests' identified in the current Code 750 practice. In these areas, Code 750 has made a conscious effort to tailor processes that address these areas while adhering closely to the Code 760 general structure. For a more comprehensive understand of how Code 750 processes are enhanced, refer to *Code 750 Process Variance* table in *Appendix F*.

3 PROJECT MANAGEMENT STANDARDS

This Standard defines the project management processes to be followed by Enterprise Solutions Division Code 750 from concept to implementation, and includes processes and procedures for requirements analysis, application development, and testing. Code 750 project categorization is dictated by three elements:

- Budget i.e., the estimated costs associated with the project
- Level of Effort (LOE) i.e., the time required to complete all tasks necessary to get the application to production
- Governance, the level of approval required to move the project forward within the confines of the organization

The five project categories are a guide for this standard and are detailed below. The project categories are essential to the accurate classification of application development efforts within the Enterprise Solutions Division.

This Standard also guides the flow of project change, and instructs all levels of Code 750 *process implementers* and methods of identifying changes in projects and how to manage this change. With the introduction of the PTP or Project/Task Plan, the goals of this Standard are to:

- Facilitate lower-level planning for the project by creating a more credible project plan
- Enhance the application development solutions discussion before project activities are enacted
- Advance effective decision-making by introducing a more formal review and approval process at defined interval throughout the project life cycle and prior to proceeding to the next phase of a project i.e., *Key Decision Points (KDPs)*
- Restore customer satisfaction by following stricter procedures for requirements analysis, capture, and traceability (to design and test phases)
- Improve communication between Code 750 staff and the Guest Contractor relative to development activities budget e.g., the submission and response to cost estimates/LOE that impact the division's
- Reduce miscommunication between Code 750 staff and its customer in managing application changes
- Secure, NASA-approved, on-site/off-site repositories for physical copies of all signed documentation

Code 750 Project Categories		
Level	**Characteristics**	
A	Cost = > $____ ; LOE ≥ 1+ years; Governance: 750 management	
	Required Deliverables and Reviews	***As Needed Deliverables and Reviews***
	Project/Task Plan (PTP) Reviews: CAB (at time of CR creation), KDPs or milestone checkpoints, requirements reviews, PDR, CDR, TRR (Test Readiness Review)**, ORR, project status Documentation: CR, Dev. cost estimate/LOE, Requirements Traceability Matrix (RTM), Business Case Analysis Report (BCAR), Requirements Document (RQD), Test Plan (TP), Implementation Plan (IMP), Project Schedule	Reviews: CAB (following concept meeting), SCR, SRR*, DR Documentation: Project Management Framework (PMFA), Operations Concept Document (OCD), Statement of Work (SOW), Decommissioning Plan (DP); Project/Task Scope Plan (SCP) optional and replacement for BCAR; Preliminary Design Doc (PDD), Detailed Design Doc (DDD)
B	Cost = > $_____?; LOE = 6 months-1 year; Governance: Code 750 management and CAB review required	
	Required Deliverables and Reviews	***As Needed Deliverables and Reviews***
	Project/Task Plan (PTP) Reviews: CAB (at time of CR creation), KDPs or milestone checkpoints, requirements reviews, PDR, CDR, TRR (Test Readiness Review)**, ORR, project status Documentation: CR, Dev. cost estimate/LOE, Requirements Traceability Matrix (RTM), Business Case Analysis Report (BCAR), Requirements Document (RQD), Test Plan (TP), Implementation Plan (IMP), Project Schedule	Reviews: CAB (following concept meeting), SRR, DR Documentation: Project Management Framework (PMFA), Operations Concept Document (OCD), Statement of Work (SOW), Decommissioning Plan (DP); Project/Task Scope Plan (SCP) optional and replacement for BCAR; Preliminary Design Doc (PDD), Detailed Design Doc (DDD)
C	Cost = > $____?; LOE = 40 hours to 6 months; Governance: Code 750 management and CAB review required	
	Required Deliverables and Reviews	***As Needed Deliverables and Reviews***
	Project/Task Plan (PTP) Reviews: CAB (at time of CR creation), KDPs or milestone checkpoints, requirements reviews, PDR, CDR, TRR (Test Readiness Review)**, ORR, project status Documentation: CR, Dev. cost estimate/LOE, Requirements Traceability Matrix (RTM), Business Case Analysis Report (BCAR), Requirements Document (RQD), Test Plan (TP), Implementation Plan (IMP), Project Schedule	Reviews: CAB (following concept meeting), SRR, DR Documentation: Project Management Framework (PMFA), Operations Concept Document (OCD), Statement of Work (SOW), Decommissioning Plan (DP); Project/Task Scope Plan (SCP) optional and replacement for BCAR; Preliminary Design Doc (PDD), Detailed Design Doc (DDD)

**SRR (System Requirements Review) is a multi-session review*

***TRR (Test Readiness Review) is exclusive to Code 750; known as TRR (Transition Readiness Review in other organizations.*

Code 750 Project/Task Categories *cont'd*		
Level	**Characteristics**	
D	Cost = ____?; LOE > 16 hours and < 40 hours; Governance Code 750 TM **Special Note: If the complexity of the project warrants or if new technology, application, service, or product is requested and anticipated to take less than 40 hours to complete, Project Category D will follow the same project life cycle as project categories A,B and C.**	
	Required Deliverables and Reviews	***As Needed Deliverables and Reviews***
	Reviews: Task Lead review of CR, test case review Documentation: CR, Dev. cost estimate/LOE, Documented test scenarios	Reviews: ORR Documentation: Project schedule
E	Cost = ____?____; LOE < 16 hours; Governance Code 750 TM	
	Required Deliverables and Reviews	***As Needed Deliverables and Reviews***
	Reviews: Task Lead review of CR Documentation: CR	Reviews: CR review Documentation: Documented test scenarios

3.1 Project Planning

Project Planning is conducted in the *Formulation Phase.* Here is where the identification of how the program or project supports the Agency's strategic needs, goals, and objectives; the assessment of feasibility, technology and concepts; risk assessment, team building, development of operations concepts and acquisition strategies; establishment of high-level requirements and success criteria; the preparation of plans, budgets, and schedules essential to the success of a program or project; and the establishment of control systems to ensure performance to those plans and alignment with current Agency strategies is determined.

The Enterprise Solution Division will enact standards that will emphasis project formulation because preparation of project concepts and plans is vital to a project's success.

Procedures for Code 750 Project Planning											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
All Initiatives											
1	Customer, TM, or Contractor TL initiates a 'request'.	**X**		**X**			**X**				
2	Use the Code 700 Support Desk checklist to identify the type of request. *Note that Appendix D provides the current checklist used by the Code 700 Support Desk. This will need to be modified to support the new process.*										**X**
2.1	If the request is identified as an incident, an INC is drafted and submitted to the Contractor TL. TIMEFRAME: WITHIN 24 HOURS										**X**
2.1.1	INC is resolved. TIMEFRAME: IMMEDIATELY						**X**		**DC**		
2.1.2	Close INC in Remedy. This is the responsibility of the assigned group. TIMEFRAME: WITHIN 24 HOURS						**X**		**DC**		
2.2	If the request is identified as change request, a CR is drafted.										**X**
2.2.1	Further identify the change as a NEW application, platform, software language or complete rewrite (based on information provided by the requestor) and draft/submit a CR.										**X**
2.2.1.1	Introduce CR (with whatever information is available at the time) to the CAB.									**X**	

Procedures for Code 750 Project Planning *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
All Initiatives *cont'd*												
2.2.1.2	Review and approve CR. TIMEFRAME: WITHIN 48 HOURS OF RECEIPT								**X**		
2.2.2	Further identify the request as a pre-approved Service Request (SR).										**X**
2.2.2.1	Draft and submit SR. TIMEFRAME: WITHIN 24 HOURS OF RECEIPT OF REQUEST			**X**			**X**				**X**
2.2.2.2	Address SR and begin work within defined parameters. TIMEFRAME: BASED ON SERVICE REQUEST (SR) SLA						**X**		**DC**		
2.2.2.3	If work can be completed within the established parameters then do so, and update SR with actual time spent on SR. TIMEFRAME: BASED ON SERVICE REQUEST (SR) SLA						**X**		**DC**		
2.2.2.4	Note if work cannot be completed within the established parameters, send request to appropriate Code 750 Civil Servant.		**X**								**X**
2.2.3	Further identify the change as a modification to an EXISTING application (based on information provided by the requestor) and draft/submit a CR.										**X**
2.2.4	Enter high level LOE in CR and send to TM for approval. TIMEFRAME: 1 BUSINESS WEEK FOLLOWING SUBMISSION						**X**				
2.2.5	Review CR and approve if acceptable. If the high level LOE is not acceptable, send the CR back to Contractor TL for revised LOE or reject initial LOE without requesting re-assessment. TIMEFRAME: 1 TO 3 BUSINESS DAYS			**X**							
2.2.5.1	If LOE is greater than 40 hours, follow planning for *Project Categories A, B, and C* (below).		**X**		**X**						
2.2.5.2	If LOE is between 16 and 40 hours, follow planning for *Project Category D* (below).		**X**		**X**						
2.2.5.3	If LOE is less than 16 hours, follow planning for *Project Category E* (below).		**X**		**X**						
2.2.6	Review CR and either cancel or reject CR (based on issues related to budget or schedule).			**X**							

Procedures for Code 750 Project Planning *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
2.2.6.1	Update CR with remarks reflecting reason for rejection.			X							
2.2.7	Advise Customer of state of request.		X								
Planning to Support New Work (project categories A, B, and C, LOE > 40 hours to 1+ years)												
3	Initiate a 'concept' meeting i.e., a discussion of the customer's application need. Note scheduling of concept meeting is based on Code 750 project priorities and availability of key resources. TIMEFRAME: 1 BUSINESS DAY		X									
3.1	Discuss, identify and document high level requirements and scope of the proposed initiative, the timeframe for production availability of the proposed application (or application change or enhancement), the stakeholders who would be directly or indirectly impacted by the proposed new (enhanced or changed) application.	X			X	X	X					
3.2	Discuss known issues with the current application if Customer is requesting enhancements to an application or a change/upgrade in technology/software/hardware for an existing application.	X			X	X	X					
3.3	Document next steps for the Customer before adjourning meeting.					X						
4	If concept meeting yields new information related to the initiative, convene a review of new project details via a CAB meeting. TIMEFRAME: 1 BUSINESS DAY; SCHEDULED MEETING		X			X	X		X			
4.1	Request that all participants of the (CAB) review sign a routing sheet indicating their understanding of the project as described by the TL and resulting from new/updated information discussed in the concept meeting with customer.		X						X			
5	If no new information results from concept meeting with customer, devise propose solutions (*good, better, best)* that could potentially satisfy the Customer's application need. TIMEFRAME: 1-2 BUSINESS DAYS		X	X			X					

Procedures for Code 750 Project Planning *cont'd*											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
cont'd											
5.1	Incorporate in appropriate detail the proposed solutions/select solution in an SCP or BCAR depending on the level of information needed for the particular application development effort. Note that the Customer's requirements known at the time of the creation of the SCP/BCAR should be a basis for the options and recommended solution. TIMEFRAME: 1-2 BUSINESS WEEKS						**X**				
5.1.1	Content of the SCP/BCAR: It is the responsibility of the Contractor TL to offer, for each option in the Application Solution Package, technical details that will address any and all potential issues that could impact the NASA environment including new software/platform/language compatibility (to NASA environment) issues; simultaneous user capacity restrictions; accessibility to and availability new software versions without cost or complexity e.g., for COTS solutions; and development resources' knowledge of proposed new technology in order to address implementation and production issues expeditiously and correctly. The Application Solution Package must also address any potential performance or security requirements for the new application, and identify any potential risks to the application development effort for each proposed option.						**X**				
5.2	Create and affix a draft PTP to the *SCP* (or *BCAR*) as a cover sheet to highlight the proposal content. These documents together will be known as the *application solution package*. Note that if the project does not require a comprehensive, solutions strategy, the submission of an *RQD* along with a PTP to Code 750 management for approval will suffice. TIMEFRAME: 1 BUSINESS DAY		**X**			**X**					

Procedures for Code 750 Project Planning *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Planning to Support New Work (project categories A, B, and C, LOE > 40 hours to 1+ years) *cont'd*												
5.2.1	Submit *Application Solution Package* to dev. team for cost estimate/LOE. TIMEFRAME: ½ BUSINESS DAY		X									
5.2.2	Send responses to application solution package back to PM/TL in the form of questions, cost estimate/LOE for consideration. TIMEFRAME: TWO BUSINESS WEEKS						X					
5.2.2.1	If not satisfied with cost estimate/LOE, go back to Contractor TL for clarification or more discussion. TIMEFRAME: 1 BUSINESS DAY		X				X					
5.2.2.2	If cost estimate/LOE is approved by PM/TL, finalize PTP by updating with dev. estimate of cost and LOE. TIMEFRAME: ½ BUSINESS DAY		X			X						
5.2.3	Create and affix to the *Application Solution Package* i.e., the final PTP with BCAR or RQD, the routing sheet signed by those who participated in project review via a CAB meeting or internal meeting or in response to review of the project artifacts via email. Note: The routing sheet must be signed by all designated parties prior to review/approval of project by Code 750 Division Chief.		X			X						
5.2.4	Submit *Application Solution Package* to Code 750 Division Chief for review and approval/disapproval.		X									
5.2.5	Review then accept (by signing) or reject the *Application Solution Package*. This is a *KDP* i.e., Key Decision Point to go-no-go for *Formulation* phase. TIMEFRAME: 1 BUSINESS DAY		Div. Chief									
5.2.6	Submit *application solution package* to Customer for signoff.	X										
5.3	Submit project documents to the Configuration Manager for uploading to appropriate folder on the SharePoint site. TIMEFRAME: ½ BUSINESS DAY				X							

Procedures for Code 750 Project Planning *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Planning to Support New Work (project categories A, B, and C, LOE > 40 hours to 1+ years) *cont'd*												
6	Prepare for *project kickoff* by creating RTM that defines project scope, crafting a standard schedule with agreed to baseline start and end dates for project milestones. TIMEFRAME: 2 BUSINESS DAYS					**X**						
6.1	Sponsor a *project kickoff* with stakeholders, impacted user groups, and project team members. Agenda for project kickoff should set the tone for how the Customer's expressed needs will be managed from Requirements Analysis to Implementation and every project phase therein. TIMEFRAME: 1 BUSINESS DAY		**X**									
Planning to Support Change to Existing Application (project category D, LOE between 16 and 40 hours)												
7	Follow *Project Planning* steps 2.2.2 through 2.2.4. **Special Note: If the complexity of the project warrants or if new technology, application, service, or product is requested and anticipated to take less than 40 hours to complete, Project Category D will follow the same project life cycle as project categories A,B and C.**											
7.1	Develop code. TIMEFRAME: DEFINED BY LOE						**X**					
7.2	Create test scenario. TIMEFRAME: DEFINED BY LOE						**X**					
7.3	Test code.						**X**					
7.3.1	If code change is not tested successfully, fix issue(s) identified by test.						**X**					
7.3.2	If code change is tested successfully, update CR with test results and request that Customer conduct user acceptance testing (UAT). TIMEFRAME: REQUEST THAT THE CUSTOMER PROVIDE FEEDBACK ON TEST WITHIN ONE WEEK.						**X**					
7.4	If UAT is successful, test scenario is signed off on by way of an email verifying approval to move application code to PROD.	**X**										
7.5	Add task to CR with implementation instructions for DC. TIMEFRAME: ONE WEEK PRIOR TO IMPLEMENTATION DATE						**X**					

Procedures for Code 750 Project Planning *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Planning to Support Change to Existing Application (project category D, LOE between 16 and 40 hours) *cont'd*											
7.5.1	Conduct ORR where all activities relative to implementation must be verified completed. The ORR checklist is used to review these items. TIMEFRAME: CONDUCTED ONE WEEK PRIOR TO IMPLEMENTATION; 30 MINUTE MEETING		**X**						**X**		
7.5.2	Approve task (push to PROD) in CR.								**X**		
7.5.3	Follows implementation instructions provided by Contractor TL in CR								**DC**		
7.6	Move code to PROD environment.								**DC**		
7.7	Close CR in Remedy.		**X**	**X**			**X**				
Planning to Support Change to Existing Application (project category E, LOE < 16 Hours)											
8	Follow *Project Planning* steps 2.2.2 through 2.2.4.										
8.1	Develop code. TIMEFRAME: DEFINED BY LOE						**X**				
8.2	Test code.						**X**				
8.2.1	If code change is not tested successfully, fix issue(s) identified by test.						**X**				
8.2.2	If code change is tested successfully, update CR with test results and request that Customer conduct user acceptance testing (UAT).						**X**				
8.2.3	If UAT is successful, verify via email approval to move application code to PROD.	**X**									
8.3	Add task to CR with implementation instructions for DC. TIMEFRAME: ONE WEEK PRIOR TO IMPLEMENTATION DATE						**X**				
8.3.1	Conduct ORR where implementation instructions are reviewed. TIMEFRAME: AS DEFINED IN THE PROJECT SCHEDULE		**X**						**X**		
8.3.2	Approve task (push to PROD) in CR.								**X**		
8.3.3	Follows implementation instructions provided by Contractor TL in CR								**DC**		
8.4	Move code to PROD environment.								**DC**		
8.5	Close CR in Remedy.		**X**	**X**			**X**				

3.2 Project Scheduling

Project scheduling is an integral part of the project planning process. Scheduling establishes the timelines, delivery and availability of project resources, whether they be personnel, inventory or capital. A project schedule is created for project categories A, B, C and D (as needed). The Code 750 project schedule adheres to the NASA-approved schedule with subtle modifications to the Formulation phase naming convention and recognition of the Post-Implementation phase following the Implementation phase and omission of reference to the Translation and Post-Translation phases. The Code 750 schedule includes the following phases:

- Formulation
- Requirements Analysis
- Design
- Development
- Test
- Implementation
- Post-Implementation

The Post-Implementation phase continues for 30 days for deployment. Following the 30 days, the TL will initiate contact with the customer relative to additional requirements considerations.

Keeping the project schedule current is an ongoing effort that must take place at every phase in the project life cycle, and impacts the KDPs and milestone checkpoints in the application development effort. The project schedule and communication to the primary stakeholders of changes to the project schedule are the responsibility of the PM/TM. The project schedule includes two sets of dates – baseline start/end dates and actual start/end dates. The baseline dates are projected dates, whereas the actual dates reflect when tasks actually commence and complete. The Code 750 project schedule template is illustrated in *Appendix G*.

Procedures for Code 750 Project Scheduling											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
1	Initiate a high level or proposed project schedule as part of the technical proposal submission and based on Customer's input.						**X**				
2	Create a more detailed schedule in preparation for the project kickoff following approval of the project by the Code 750 Division Chief.		**X**	**X**		**X**					
3	Update and distribute the project schedule following every, weekly project status meeting when a discussion of tasks baseline dates will take place. Feedback of tasks dates met, delayed or cancelled will be provided by the resources responsible for the task(s) within the project milestone. - When baseline (start/end) dates for project tasks are re-evaluated based on feasibility, resources availability, etc., the schedule must be updated. - In advance of an actual task start/end date, the resource responsible for the task must advise of the likelihood of the date being met.		**X**	**X**		**X**					

3.3 Requirements Management

The requirement is a capability to which a project outcome (application, system or service) should conform. Requirements management is the process of documenting, analyzing, tracing, prioritizing and agreeing on requirements and then controlling change and communicating changes to relevant stakeholders. It is an ongoing process throughout the project life cycle.

Procedures for Code 750 Requirements Management											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Procedures for Code 750 Requirements Management (project categories A, B, and C)											
1	Begin *Requirements Analysis* phase of the project.	**X**	**X**	**X**		**X**					
1.1	Elicit requirements from the Customer using an RTM (requirements traceability matrix) that is created in MS Excel. TIMEFRAME: PER THE PROJECT SCHEDULE	**X**				**X**					
1.2	If modular application, organize requirements by functional areas.					**X**					
1.3	Conduct requirements reviews to confirm, add, and change requirements. TIMEFRAME: WEEKLY (OR MORE FREQUENT)		**X**			**X**					
1.4	Produce and distribute minutes for each requirement review conducted. TIMEFRAME: FOLLOWING EACH MEETING					**X**					
1.5	Determine, through working sessions, requirements that can be delivered in initial phase versus in a later release.	**X**	**X**			**X**					
2	Baseline requirements with Customer agreement on accuracy of requirements for a given release.	**X**	**X**			**X**					
3	Update project schedule with actual dates for Requirements Analysis tasks. TIMEFRAME: WEEKLY					**X**					
4	Review final RTM with Dev. team. Address any questions or concerns. TIMEFRAME: 1 BUSINESS DAY	**X**	**X**			**X**	**X**				

Procedures for Code 750 Requirements Management *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Procedures for Code 750 Requirements Management (project categories A, B, and C)												
5	Resubmit for approval the customer requirements if, as a result of new requirements, the budget is revised, scope is changed, or key dates e.g., implementation date in the project schedule are altered. TIMEFRAME: 1 BUSINESS DAY		**X**			**X**					
5.1	Re-baseline requirements. TIMEFRAME: ½ BUSINESS DAY		**X**			**X**					
5.2	Update project schedule. TIMEFRAME: ½ BUSINESS DAY		**X**			**X**					
5.3	Approve resubmitted *Application Solution Package*.	**X**	Div. Chief								
6	Submit all requirements artifacts i.e., RTM to the Configuration Manager for upload to SharePoint site. TIMEFRAME: 1 BUSINESS DAY					**X**				**X**	
6.1	The draft version and any revisions of documentation should be separated from management-approved artifacts.									**X**	
7	Host Requirements Analysis milestone review to exit this phase of project. - This is a *KDP* i.e., Key Decision Point to go-no-go for *Design* phase. TIMEFRAME: 1 BUSINESS DAY					**X**					

3.4 Application Development Process Standards

Procedures for Code 750 Application Development												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Procedures for Code 750 Application Development (project categories A,B, and C)												
1	Upon completion of *Requirements Analysis* phase, enter *Design* phase. TIMEFRAME: ADHERE TO PROJECT SCHEDULE						**X**				
2	Use customer requirements (defined in RTM) to build design i.e., PDD or Preliminary Design Document. TIMEFRAME: 1 TO 2 WEEKS, BUT EXACT TIMEFRAME IS BASED ON PROJECT SCHEDULE						**X**				
3	Develop ITPA/PIA (Privacy Impact Assessment) & NF 1748 to ensure adherence privacy policies. Note this task applies only to new application initiatives. TIMEFRAME: ½ BUSINESS DAY		**X**								
3.1	For a new platform, update the CR with information to secure an IP address, hostname, server name for the new platform/environment. This information is instructions for the Data Center.		**X**								
4	Register application in STRAW (System for Tracking & Registration of Application Websites) & system inventory to attain a hostname, server name, IP address for application. Note this task applies only to new application initiatives. TIMEFRAME: ½ BUSINESS DAY		**X**								
5	Participate in project status meeting and address any issues with design. Ensure design (storyboards, screen mockups) trace to baseline requirements. TIMEFRAME: WEEKLY	**X**	**X**		**X**		**X**				
6	Conduct design demonstrations (in the form of storyboards, screen mockups, etc.) with Customer and gain approval of work. TIMEFRAME: AS REQUIRED	**X**	**X**		**X**		**X**				

Procedures for Code 750 Application Development *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Procedures for Code 750 Application Development (project categories A,B, and C) *cont'd*												
7	Create and present, if necessary for requirements changes, a DDD or Detailed Design Document. TIMEFRAME: 1 TO 2 WEEKS	X					X				
8	Host *Design* checkpoint. - This is a *KDP* i.e., Key Decision Point to go-no-go for *Development* phase. TIMEFRAME: 1 BUSINESS DAY	X			X						
9	Receive all design documents (from Dev. team) and submit to the Configuration Manager for upload to the SharePoint site. TIMEFRAME: ½ DAY		X			X					
10	Upon completion of *Design* phase, enter *Development* phase. TIMEFRAME: ADHERE TO PROJECT SCHEDULE		X				X				
10.1	Complete coding for application effort. TIMEFRAME: 2 WEEKS, BUT EXACT TIMEFRAME MUST ADHERE TO PROJECT SCHEDULE						X				
10.2	Host Development checkpoint with Customer to address issues with work. TIMEFRAME: WEEKLY	X	X		X		X				
11	Ready code for unit testing. *Follow Testing standards.* TIMEFRAME: 1 WEEK						X				

3.5 Testing Standards

This Standard provides procedures for entry and exit of testing cycles; how testing should be conducted; how test plans should be documented and reviewed; and how test results should be communicated.

3.5.1 Development Level Testing (e.g., code/unit testing and system testing)

- Code/Unit Testing. This first level of testing conducted by the Development team is Code/Unit Testing. This testing is a method by which individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures, are tested to determine if they are fit for use.

- System integration testing (SIT) is a testing process that exercises a software application's coexistence with applications in the enterprise. With multiple integrated applications/systems, assuming that each have already passed system testing, SIT proceeds to test their required interactions. This level of testing is intended for collaborative projects within a standard software test life cycle. Code 750 SIT has few cases where collaborative projects are common place. [***Recommendation: Near future Code 750 standards should include looking across the enterprise to identify shared data and system functionality for reuse***].

3.5.2 Quality Assurance (QA) Testing

QA (Quality Assurance) testing is an investigation conducted to provide stakeholders and key user groups with information about the *quality* of the application under test. QA testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of the application's implementation. Test techniques include, but are not limited to, the process of executing an application module with the intent of finding software defects.

QA testing can be stated as the process of validating and verifying that a computer application (in its entirety), application module (i.e., some component of an application), query or program:

- Meets the requirements that guided its design and development
- Operates as expected
- Can be implemented with the same characteristics
- Satisfies the intended needs of stakeholders

3.5.3 Section 508 Testing

Section 508 of the Rehabilitation Act Amendments of 1998 mandates that U.S. government agencies provide people with disabilities access to electronic and information technology. The Enterprise Solutions Division Code 750 has an internal resource dedicated to embarking on testing that ensures 508-compliancy. This level of testing web-based applications is conducted by referencing the approved customer requirements and using a standard *Section 508* checklist as a test plan executed typically during the Design phase of the project.

Procedures for Code 750 Testing												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Code 750 Testing (for project categories A,B, and C)												
1	Prior to completion of the design phase, conduct Section 508 testing to ensure application design is Section 508 compliant. TIMEFRAME: 1-2 BUSINESS DAYS						**X**	**X**			
1.1	Sponsor design review to discuss any aspects of the design that may not adhere to Section 508. TIMEFRAME: ½ BUSINESS DAY						**X**	**X**			
1.2	Update project schedule with date Section 508 testing completed. TIMEFRAME: ½ BUSINESS DAY					**X**					
2	Discuss development progress at weekly project review (i.e., development milestone checkpoint). This is a *KDP* i.e., Key Decision Point to go-no-go to Test phase TIMEFRAME: WEEKLY							**X**			
3	Upon completion of the Development phase (entry criteria for software testing) and barring no issues in development brought forth in the project review, commence developer's testing cycle i.e., unit testing. TIMEFRAME: TWO WEEKS (TO INCLUDE SIT)				**X**						
3.1	Commence code/unit testing. TIMEFRAME: BASED ON PROJECT SCHEDULE						**X**				
3.2	Make any changes to code based on test results (pass/fail).						**X**				
3.3	As part of weekly project review, advise project team and customer of any changes in code that impact the original intent of any requirement.						**X**				

Procedures for Code 750 Testing *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Code 750 Testing (for project categories A,B, and C) *cont'd*												
4	Using the TP (Test Plan) template, create a test plan that reflects the level of testing to be executed relative to the **approved** customer (system) requirements and socialized with team. This level of software testing is *System Integration testing (SIT)*. TIMEFRAME: 1 BUSINESS DAY						X					
4.1	Submit the TP for review.				X		X					
4.2	Schedule and conduct a test plan review (TPR) with TL and other testing counterparts e.g., QA tester and Section 508 tester. Address all questions during review, and make any alterations to test plan where necessary. TIMEFRAME: 1 BUSINESS DAY		X			X	X	X				
4.3	Send the original, approved TP to the Configuration Manager who will upload the plan to the SharePoint site.						X					
4.3.1	Follow all Document Management procedures to document placement and naming convention.									X		
5	Commence system integration testing if no questions or changes to test plan. TIMEFRAME: 1 WEEK						X					
5.1	Document all results (pass/fail) in test plan. For all test cases that fail, report (in test plan) an explanation for the failure and any follow-up or updated instructions relative to the test case. TIMEFRAME: ½ BUSINESS DAY						X					
6	Send updated test plan to the Configuration Manager who will upload the plan to the SharePoint site.						X			X		
6.1	Follow all *Document Management* procedures to determine placement on SharePoint, and adhere to version control.									X		
6.2	Send updated test plan to next level of testing i.e., QA (Quality Assurance) testing. TIMEFRAME: 1 BUSINESS DAY						X					

Procedures for Code 750 Testing *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Code 750 Testing (for project categories A,B, and C) *cont'd*												
7	Conduct Section 508 test (final check). Note that this is a final check for Section 508 compliancy. If the code from a UI perspective was not altered, there should be no 508 issues identified. TIMEFRAME: 1 BUSINESS DAY							X				
8	Conduct QA testing using test plan created by development team. TIMEFRAME: 1 WEEK							X				
8.1	Discuss any issues or varied results with Dev. team. Complete QA testing and report findings to project team and customer.						X	X				
8.2	Complete QA testing and report results (in writing) to project team and representative of user group who will be conducting UAT. It is important that the user group understand what functionality works/does not work prior to moving forward with scheduled UAT. TIMEFRAME: 3 BUSINESS DAYS TO 1 WEEK	X						X				
8.3	Advise BA of completion of QA test so that project schedule can be updated.					X		X				
8.4	Provide updated test plan to user group to begin UAT.	X						X				
9	Assist user group with UAT if necessary.							X				
9.1	Complete UAT within scheduled timeframe.	X										
9.2	Notify Code 750 QA tester of user acceptance test results.	X						X				
10	Conduct formal project review (i.e., testing milestone checkpoint). Advise project team of UAT success/fail. - The results of this testing will dictate a KDP i.e., go-no-go to the *Implementation phase*.							X				

Procedures for Code 750 Testing *cont'd*											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Code 750 Testing (for project category D)											
11	Determine the necessity of creating test scenarios for the CR verses a full test plan.		X								
11.1	If a test scenario is deemed necessary, create test scenarios that describe how to requirements for the CR will be executed in TEST environment. *Note that neither test plans nor test scenarios are required for incidents.*						X				
11.2	Document test scenario in the Remedy system on the CR record.						X				
11.3	Conduct (developer) testing. TIMEFRAME: ½ BUSINESS DAY, BUT BASED ON PROJECT CATEGORY	X					X	X			
11.4	Advise TL and Customer of results of testing.						X	X			
11.5	Submit final (with results) test scenarios to the Configuration Manager for upload to SharePoint site.						X	X		X	
11.6	Conduct TRR (i.e., testing milestone checkpoint) with all impacted parties. Note the results of this testing will dictate a KDP i.e., go-no-go to the *Implementation* phase.								X		

3.6 Change Management Standards

The objective of Change Management is to minimize scope changes (churn) once the initial decision is made to initiate a project. Defining the key decision points (KDPs) in the project lifecycle, and identifying the work products that are required at those points to ensure that good decisions can be made accomplish this. Change, however, is inevitable in a project context and there is a need for a mechanism to manage that change. Managing change within the Enterprise Solutions Division is tri-level – new initiatives, change requests, and incidents. The Code 750 change management process is driven by Remedy from a systems perspective and by the CAB (Change Advisory Board) from a process perspective.

This Standard distinguishes between the handling of change requests and incidents; and the business process flow in *Appendix C* illustrates the differences between incidence and each type of 'change' managed by Code 750. Procedures detailed in the Project Planning section of this SOP dictate the steps to be followed in the handling of both incidents and change requests identified within Remedy. The steps are re-iterated below.

Procedures for Code 750 Change Management (Remedy System component)												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
All Initiatives												
1	Customer, TM, or Contractor TL initiates a 'request' via the Code 700 Support Desk.	X		X			X				
2	Use the Code 700 Support Desk checklist to identify the type of request.										X
2.1	If the request is identified as an incident, an INC is drafted and submitted.			X							X
2.1.1	If the INC is a *service request*, enter an LOE necessary to address the request; otherwise, the assigned group will resolve the INC.										
2.1.2	INC is resolved.						X		DC		
2.1.3	Close INC in Remedy. This is the responsibility of the assigned group.						X		DC		
2.2	If the request is identified as change request, a CR is drafted.			X							X
2.2.1	Further identify the change as a NEW application, platform, software language or complete rewrite (based on information provided by the requestor) and draft/submit a CR.										X
2.2.1.1	Introduce CR (with whatever information is available at the time) to the CAB.									X	
2.2.1.2	Review and approve CR.								X		
2.2.2	Further identify the change as a modification to an EXISTING application (based on information provided by the requestor) and draft/submit a CR.										X
2.2.3	Enter high level LOE in CR and send to TM for approval.						X				
2.2.4	Review CR and approve if acceptable. If the high level LOE is not acceptable, send the CR back to Contractor TL for revised LOE or reject initial LOE without requesting re-assessment.			X							
2.2.4.1	If LOE is greater than 40 hours, follow planning for *project categories A, B, and C*.		X		X						
2.2.4.2	If LOE is between 16 and 40 hours, follow planning for *project category D*.		X		X						
2.2.4.3	If LOE is less than 16 hours, follow planning for *project category E*.		X		X						

Procedures for Code 750 Change Management (Remedy System component) *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
All Initiatives *cont'd*												
2.2.5	Review CR and reject (based on issues related to budget or schedule).			X							
2.2.5.1	Update CR with remarks reflecting reason for rejection.			X							
2.2.6	Advise Customer of state of request.		X								
2.3	Update CR at every key activity identified throughout the project/CR life cycle e.g., development cost estimate/LOE and implementation tasks (instructions).		X	X			X				
2.4	Close CR in remedy when all work is complete.		X	X			X				

4 CONFIGURATIONS MANAGEMENT

Configuration management is a formal process to document and control the coordination, evaluation, approval, and release of all changes; to maintain all project documents and drawings; and to ensure all requirements are complied with and all proposed changes have been implemented and resolved. Without configuration management, project activities would not have traceability. Configuration management ensures that technical errors are corrected and new requirements accommodated. It ensures that project objectives are being met and that the project team is performing effectively.
The standards detailed in this section are two-fold:

(1) Document/Records Management
(2) Hardware/Software Delivery

4.1 Document/Records Management Standards

This Standard provides a consistent and systematic method for configuration management of products delivered to or produced by the Agency under configuration control to (a) identify the configuration of a product at various points in time; (b) systematically control changes to the configuration of the product; (c) maintain the integrity and traceability of the configuration of the product throughout its life; and (d) preserve the records of the product configuration throughout its life cycle, properly dispositioning records.

The goal of this Standard is to leverage existing NASCOM document management tools, resources and processes to support centralized document and records management within Code 750 and compliance with NASA Record Management requirements. Code 750 will use SharePoint as the central repository for project documentation to ensure:

- Standardized document and records management tools, resources and processes to support centralized document and records management have been implemented and are in use for all Corporate and Mission projects and sustaining operations activities within the Division
- Utilization of centralized document and records management tools, procedures and repositories
- Implementation of document lifecycle management
- Development and utilization of approved, standardized core documentation, templates and forms
- Utilization and management of project/task IDs and document #s
- Recordation, and centralized maintenance of on-line, electronic copies of approved documentation, and completed forms
- Utilization of formal document review process and tracking forms
- Secure, NASA-approved, on-site/off-site repositories for physical copies of all signed documentation

The SharePoint site will be administered by the Configuration Manager who will follow strict CM policies for document management and version control.

4.1.2 Document Naming Convention

The All project artifacts uploaded to the SharePoint site will follow a strict naming convention as described below:

- **Document #:** Code750-<projectname>-<docTYPE>-<version #>-<date>, where docTYPE is the acronym for the type of document presented along with the PTP (as part of the *Application Solution Package)*
- **Project/Task ID** - Code750-<projectname>-<docTYPE>-<version #>-YYYYMMDD, equivalent to the document #
- **Project/Task Plan (PTP) Number** - Code750-'*PTP*'-<PROJNAME>-YYYYMMDD
- **Effective Date**: MMDDYYYY
- **Expiration Date**: MMDDYYYY. Three years following effective date

All document numbers are assigned by the Configuration Manager.

Procedures for Code 750 Document/Records Management												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*

1	Receive and upload all projects documents to their proper folder on the SharePoint site.
	CODE 750 PROJECT DOCUMENT REPOSITORY
	- APPLICATION DEVELOPMENT Projects
	  - INSTITUTIONAL Projects
	  - Project sub folders
	  - WEBSITE projects
	  - Project Tracking 2013
	  - MISSION Projects
	  - Note, just as with Institutional, all sub-folders are organized by project name
	  - SHAREPOINT SERVICES
	- Code 750 Internal Correspondence
	- Code 750 STANDARDS
	- MGMT. APPROVED Projects
						X				**X**	

2	Attend any project reviews where there could a question related to document control.									**X**	
3	Ensure all documentation aligns with templates for NASA Procedural Requirement for IT programs and projects.									**X**	
4	Adhere to NPR 1441.1D—NASA Record Retention Schedule for document/record preservation.									**X**	
5	Ensure all documents and supporting artifacts meet with correctness in grammar and syntax prior to uploading to site.									**X**	

Procedures for Code 750 Document/Records Management *cont'd*												
Step	**Process**	**Key Personnel Role**										
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
6	Ensure that only documents that have met with proper ***approval*** reside in the proper location on the SharePoint site. Draft or revised documents should reside in a separate location on the SharePoint site.									**X**	
7	Ensure version control i.e., that each update of a document has the correct, associated **Document #** assigned. – The Document # *is Code750-<projectname>-<docTYPE>-<version #>-<date>,* where docTYPE is the acronym for the type of document presented along with the PTP (as part of the Application Solution Package)									**X**	
8	Periodically check to ensure SharePoint site is current and organized.									**X**	
9	Make recommendations to improve document/records management.									**X**	

4.2 Hardware/Software Delivery Procedures

This Standard addresses the delivery of hardware and software in support of implementation of the application or application feature/functionality to production (PROD). This segment of CM address the controlled change and update of the Development, Test and Production environments and regulate the set-up of platform, network and software components for an application release defined in the change request. Whether a major infrastructure change e.g., introduction of a new platform to the enterprise or a minor change e.g., a server move, all hardware and software changes are tracked via a change request in Remedy.

CM standards, to include operations readiness procedures and reviews, ensure that the final leg of the application development effort i.e., *Implementation* is accurate. Key layers of preparatory work enables a smooth transition from test completion to production-ready. A significant review - Operations Readiness Review (ORR) examines the actual system characteristics and the procedures used in the system's operation to ensure that it is ready for operation. The ORR certifies that all support hardware, software, personnel, procedures, and user documentation accurately reflect the deployed state of the system.

Procedures for Code 750 Hardware/Software Delivery											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
Establishment of DEV – TEST Environment											
1	As described in the *Project Planning* procedures, a discussion of DEV and TEST environment requirements necessary to support a <u>new application</u> will take place during a planning session with key Code 750 team members including the Data Center and Operations managers.										
1.1	Complete a *Request for Application Hosting form* with any requirements related to setting up DEV and TEST environments in support of the initiative. The type of information to be documented includes: - Application environment (DEV or TEST) - Type of operating system - Type of Web application server - Description of database software required - SSL required - Authentication interface - Amount of disk space needed - Administration for remote access needed? - COOP/disaster recovery plan		**X**			**X**			**X**		

Procedures for Code 750 Hardware/Software Delivery *cont'd*											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
1.2	Include this form in the final *Application Solution Package* that is submitted to the Code 750 Division Chief for review/approval.		**X**								
1.3	When CR is created for the application initiative, attach the completed form to this CR as a reference.		**X**								
1.4	Prior to the start of the Development and Test phases, request that the Data Center refer to information in the CR to setup DEV and TEST environment(s).		**X**						**X**		
2	Successfully complete all test cycles including UAT (user acceptance testing). TIMEFRAME: BASED ON PROJECT SCHEDULE	**X**					**X**	**X**			
3	Conduct user training for stakeholders who will interface directly with the application. ***[Recommendation: This could be conducted as part of UAT].***							**X**			
Establishment of PROD Environment											
4	Conduct ORR (Operational Readiness Review) in preparation for the moving application to production. Participation in this review must include members of the CAB i.e., Ops Manager and Data Center Manager. This is a *KDP* i.e., Key Decision Point to go-no-go for *the Implementation* phase. Note that the ORR is an optional review for project category D. TIMEFRAME: BASED ON PROJECT SCHEDULE		**X**						**X**	**X**	
4.1	As part of the ORR, discuss and finalize the setup requirements for the PROD environment.		**X**						**X**		
5	Facilitate operational training for resources responsible for deploying the application to production environment on the scheduled date.								**X**		

Procedures for Code 750 Hardware/Software Delivery *cont'd*											
Step	**Process**	**Key Personnel Role**									
		Customer	*PM/TL*	*TM*	*Project Team*	*Business Analyst*	*Contractor TL /Dev. Team*	*Tester (QA, Sec 508)*	*CAB (Data Ctr./Ops)*	*Configuration Mgr.*	*Code 700 Support*
6	Ensure operational contingency plans have been circulated.								**X**		
7	Move code to PROD. TIMEFRAME: BASED ON PROJECT SCHEDULE		**X**						**X**		
7.1	Move new application code to PROD TIMEFRAME: BASED ON PROJECT SCHEDULE		**X**						**X**		
7.2	Move fixes for incidents to PROD. TIMEFRAME: AS FIXES ARE TESTED AND VALIDATED		**X**						**X**		
7.3	Move enhancements/changes for CRs to PROD. TIMEFRAME: SCHEDULED ON THURSDAYS		**X**						**X**		
8	Exit Implementation phase. Close CR in Remedy TIMEFRAME: BASED ON PROJECT SCHEDULE		**X**								

APPENDICES

Appendix A. Glossary of Terms & Acronyms

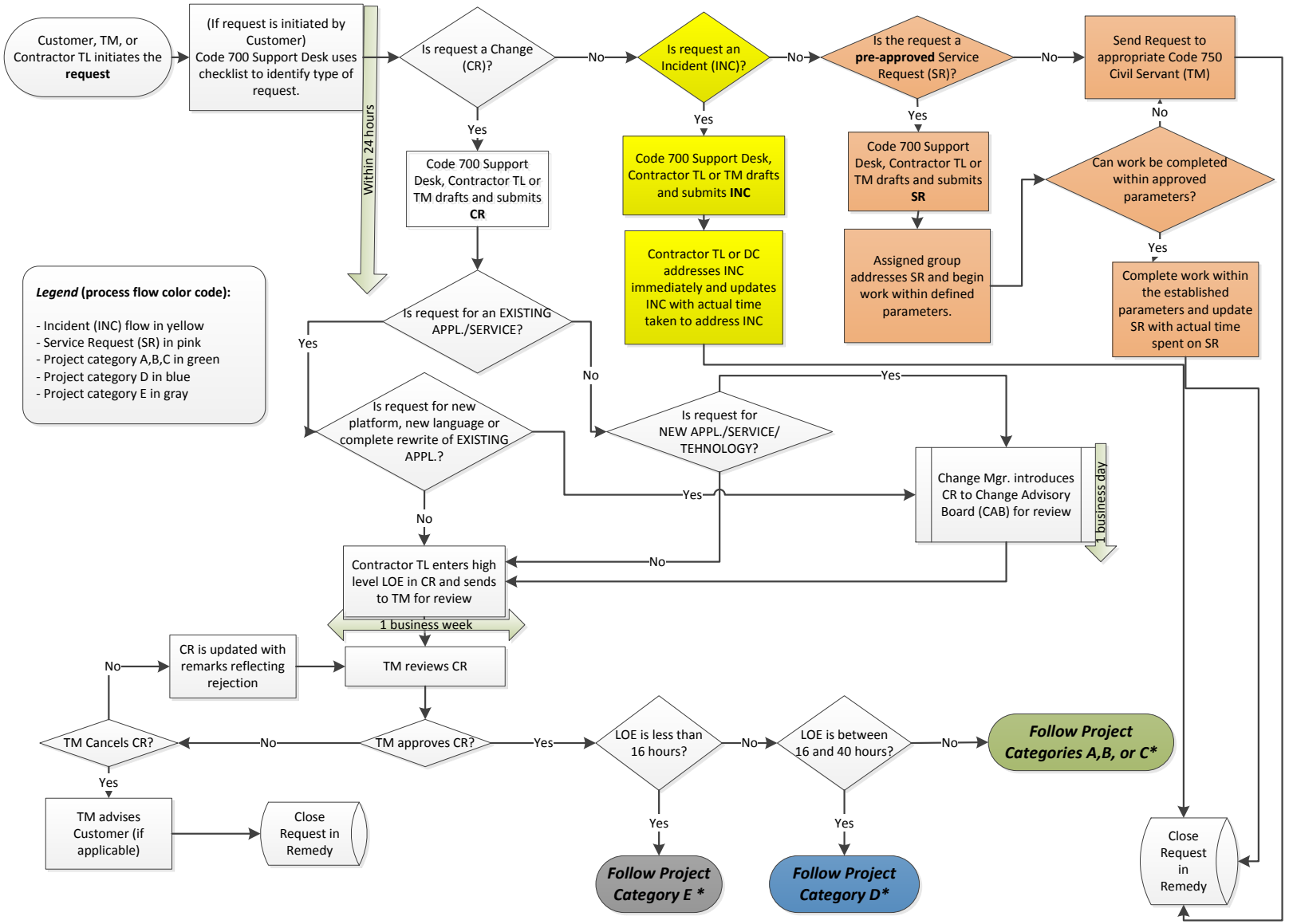
Acronym	Term	Definition
	Baseline	This term refers to the process of closing requirements such that approval of the release can be completed.
BA	Business Analyst	
BCAR	Business Case Analysis Report	
CAT	(Project) Category	
CAB	Change Advisory Board	
CCB	Configuration Control Board	
CR	Change Request	
CM	Configuration Management	
CMP	Configuration Management Package	
CDR	Critical Design Review	
DP	Decommissioning Plan	
DR	Decommissioning Review	
DDD	Detailed Design Document	
EA	Enterprise Architecture	
ESD	Enterprise Solutions Division	
FTE	Full Time Employee	
IMP	Implementation Plan – *Need to tailor*	
INC	Incident	
ISC	Information Security Concept (ISC) Review	
IDR	Internal Design Review	
KDP	Key Decision Point = *Project Milestone Checkpoints*	
LOE	Level of Effort	
ORR	Operational Readiness Review	
OCD	Operations Concept Document	
PIA	Privacy Impact Assessment	
POC	Point of Contact	
PDD	Preliminary Design Document	
PDR	Preliminary Design Review	
	Project	A specific investment identified in a Program Plan having defined requirements, a life-cycle cost, a beginning, and an end.
PCR	Project Completion Review	
PM	Project Manager	
PMP	Project Management Plan	
	Project Plan	The document that establishes the project's baseline for implementation, signed by the Division Chief, Code 750 Task Lead, and Team Lead.
PTP	Project/Task Plan	
SCP	Project/Task Scope Document	
QA	Quality Assurance	
	Rebase lining	The process by which a program/project updates or modifies the Commitment Baseline. This occurs as a consequence of internal or external drivers to the Agency.

Acronym	Term *cont'd*	Definition
RTM	Requirements Traceability Matrix	
RQD	Requirements Document	
SCR	System Concept Review	
SME	Subject Matter Expert	
	Stakeholder	An individual or organization having an interest (or stake) in the outcome or deliverables of a program/project.
SOP	Standard Operating Procedures	
SOW	Statement of Work	
STRAW	System for Tracking & Registration of Application Websites	
SR	Service Request	
SRR	System Requirements Review	
	Tailoring	The process used to adjust or seek relief from a prescribed requirement to accommodate the needs of a specific task or activity (e.g., program or project). The tailoring process results in the generation of deviations and waivers depending on the timing of the request.
TM	Task Monitor	Refers to the Code 750 TM
TL	Team Lead	Task leads include Development Task Lead and Code 750 Task Lead.
TP	Test Plan – *Initial/final versions for each test cycle*	
TRR	Test Readiness Review	
UAT	User Acceptance Test	
WYE	Work Year	Allocation type on PTP

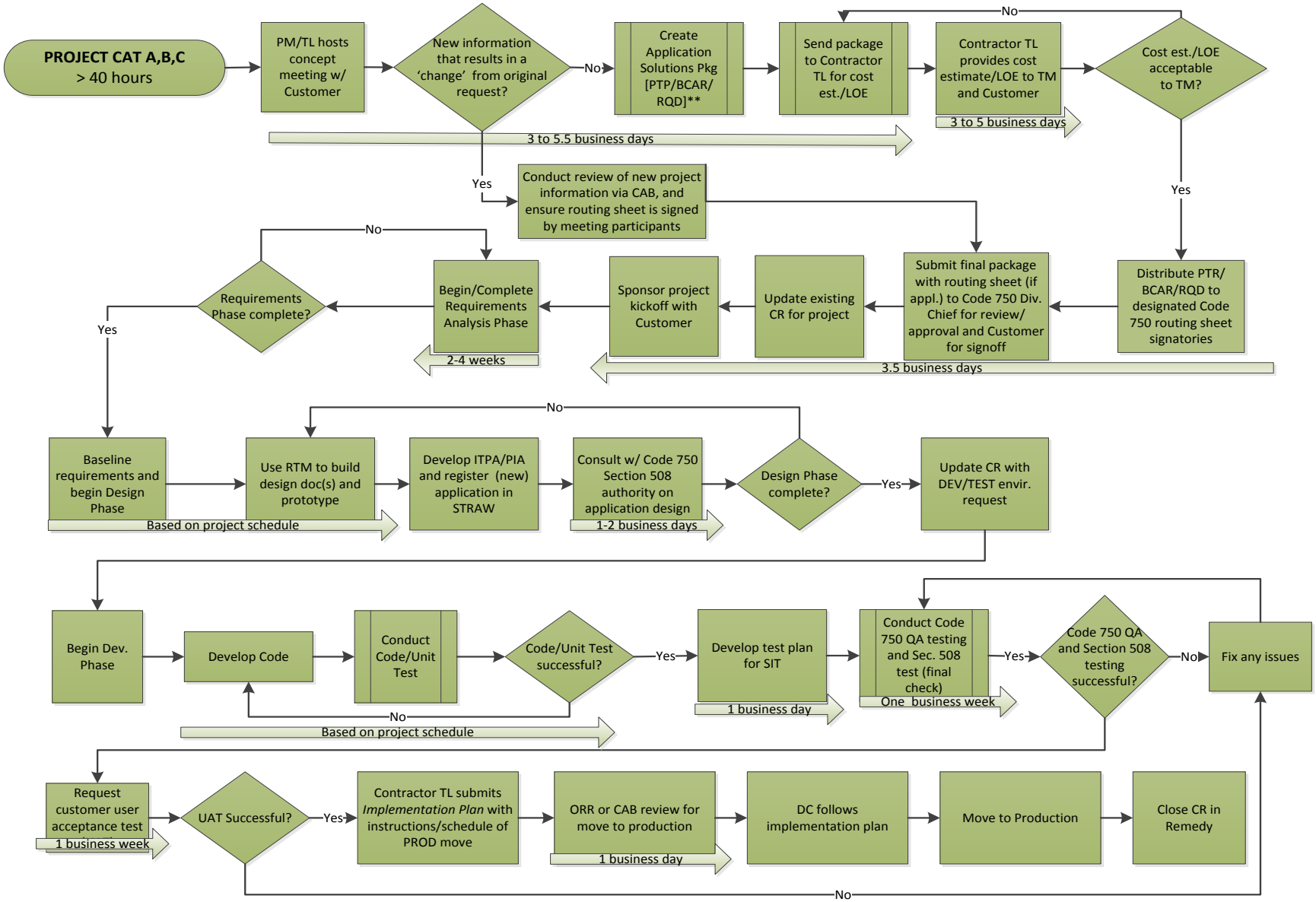
Appendix B. Enterprise Solutions Division POCs

Center/Group: GSFC / Code 750 Enterprise Solutions Division			
POC	**Role/Tasks**	**Phone**	**Email Address**
Dwaine Kronser	Division Chief	301-286-8785	dwaine.a.kronser@nasa.gov
Caroline Ardolini	Deputy Division Chief	301-286-6689	caroline.e.ardolini@nasa.gov
Thomas Perricone	Task Lead, Institutional and Reimbursable projects	301-286-3207	thomas.f.perricone@nasa.gov
Kimberly Henley	Program Manager, SharePoint Services	301-286-1276	kimberly.henley@nasa.gov
Steve Wadding	IT Specialist, Institutional and Reimbursable projects	301-286-4607	steven.l.wadding@nasa.gov
Sherita Mance	700 Support Desk Manager	301-286-5724	sherita.f.mance@nasa.gov
Steve Jung	Data Center CR Approver	301-286-5487	stephen.g.jung@nasa.gov
Ben Bartine	Contractor PM	301-286-5490	Benjamin.bartine@nasa.gov
Shau-Yun *Shau* Tsai	Contractor TL	301-286-5519	shau-yun.tsai-1@nasa.gov
Cheryl Fister	Quality Assurance Tester	301-286-9953	cheryl.a.fister@nasa.gov
Courtney Ritz	Section 508 Tester	301-286-7946	courtney.l.ritz@nasa.gov
Leslie Russ	Business Analyst	301-286-7314	leslie.russ@nasa.gov

Appendix C. Business Process Flows for Code 750 Project Categories

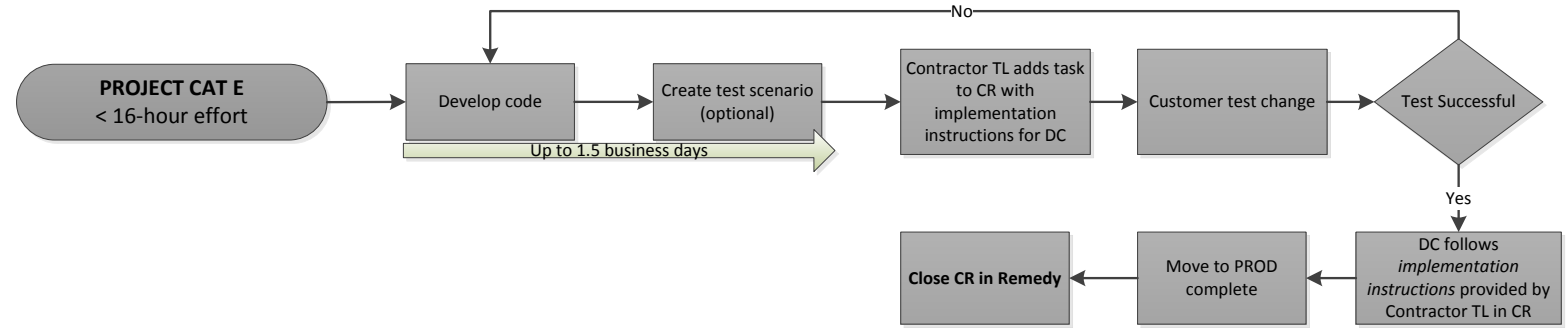


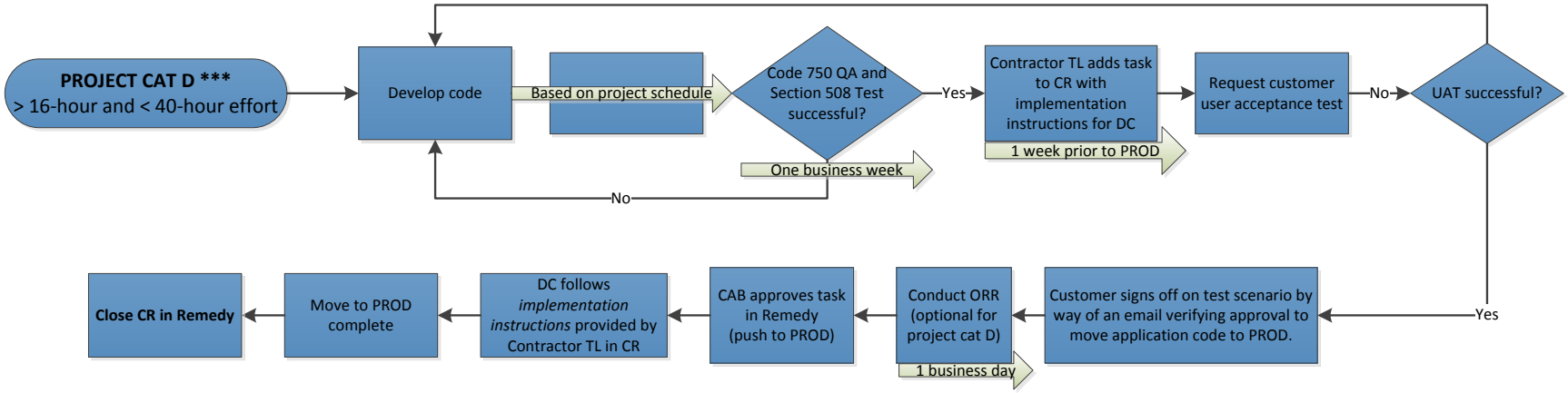
* The project categorization is based on the estimated complexity, estimated # of hours for development and test tasks, and the project schedule. The LOE is provided by the Contractor TL.
Note that all 'project' efforts including Data Center activities and SharePoint services should adhere to this SOP.
Maintenance an application, environment, etc. falls outside the guidelines of this SOP.



** It is the responsibility of the Contractor TL to offer for each option in the Application Solution Package technical details that will address any and all potential issues that could impact the NASA environment including new software/platform/language compatibility (to NASA environment) issues; simultaneous user capacity restrictions; accessibility to and availability new software versions without cost or complexity e.g., for COTS solutions; and development resources' knowledge of proposed new technology in order to address implementation and production issues expeditiously and correctly.

** Note: All content in project artifacts, including estimates, are considered preliminary until approved by the Code 750 Division Chief.





*** Special Note: If the complexity of the project warrants or if new technology, application, service, or product is requested and anticipated to take less than 40 hours to complete, Project Category D will follow the same project life cycle as project categories A,B and C.

Appendix D. Checklist to Identify Incidents and Change Requests (Job aid)

Upon receipt of a reported issue a call and/or email is submitted to the Code 700 Support Desk. The Support Desk uses the checklist to categorize the issue as an INCIDENT (INC) or a CHANGE (CR). Once determination (of type of reported issue) is made, follow standard procedures to create an INC or CR in Remedy with the appropriate detail.
Incidents /Change Request are reported in one of the following types: **<u>Incident Types:</u>** - **User Service Request –user requesting information, general questions, checking status, etc. (excluding request to change or move files into production).** - **User Service Restoration – Break fix for application or website, cant' access application or website, can't log in error messages present, etc.** **<u>Change Request:</u>** **Change Request – To change or modify existing environment, add new functionality, upgrade/enhancements, provide maintenance service, etc.**
INCIDENT (INC) Example
1. User service request for information/general questions/status
2. Restoration of a service
3. Infrastructure request
4. Restoration of infrastructure/Backup
5. System outage
6. Web Updates for Code 210
CHANGE REQUEST Example
1. Request for a change to an existing application
2. Request for a new application
3. Request a new platform, new language
4. Request for a new software language (version)
5. Is the request for a complete rewrite
6. Web Page Update or Change
7. Firewall Modification
8. Cost Estimate
9. Change or copy to TEST /Production
10. Moves to production

Proposed

Appendix E. Code 750 Artifacts (e.g., document templates)

All project artifacts listed below are available on the *Application Development* SharePoint https://itcdsp.gsfc.nasa.gov/appdev/Shared%20Documents/Forms/AllItems.aspx

- Project Task Plan (PTP)
- Business Case Analysis Report (BCAR)
- Project-Task Scope (SCP)
- Requirements Document (RQD)
- Test Plan (TP)
- Implementation Plan (IMP)
- Preliminary Design Document (PDD). This document will be used on a case-by-case basis.
- Detailed Design Document (DDD). This document will be used on a case-by-case basis.

Appendix F. Code 750 Procedural Anomalies

Standard Process/Procedure	Level*	Code 750 Process	Code 760 Process
		Current Process – Variance	*Replacement / Use in Process*
NEW Application Initiatives	A,B,C		
Project Management			
Pre-Formulation phase			The Pre-Formulation phase is at the Program level, not the Project level. Therefore it will not be addressed as part of Code 750 SOP.
Formulation phase		Project kickoff – Introduce customer needs. Creation of an RTM with high level requirements and project schedule as a starting point. Submit RTM to get dev. LOE / estimate from Dev. team.	Continue to host project kickoff and create RTM. *Scenario*: Multiple development options – *good, better, best* should be proposed to potentially meet the customer need. *New process*: Following the project kickoff, prepare a **PTP** (as cover page) and **BCAR (Business Case Analysis Report)** as detailed complement to PTP to introduce options for Code 750 management review/approval. OR *Scenario:* One solution is clearly defined to meet the customer's need. *New process*: Following the project kickoff, prepare **PTP** (as cover page) **and SCP (Project/Task Scope Document)** as detailed complement to PTP detailing one solution to the application effort and introducing the defined scope of the project.
Requirements Analysis phase		RTM (Requirement Traceability Matrix drives requirements elicitation meetings and project status reviews.	Current process of analyzing, capturing and tracking requirements using the RTM will continue. *New process*: Code 760 RQD (Requirements Document) will replace the BRD and complement the RTM.
		Create a BRD (Business Requirements Document) to provide high level business objectives, stakeholder impact, and *proposed* application screen mockups.	*New process*: Replace the BRD with the Code 750 RQD, a detailed Requirements Document.
Design/Development phase		Development teams do not currently submit for review application design documents.	Use Code 760 design document templates – PDD and DDD on a case by case basis.

Standard Process/Procedure *cont'd*	Level*	Code 750 Process	Code 760 Process
Testing phase		Development teams conduct code/unit test but test plans are extremely basic, and do not elaborate on testing results. Only one test case is submitted and inadequate entry and exit criteria are provided.	Use Code 760 Test Plan (TP) template for all test cycles (with the exception of Section 508) e.g., System Integration testing conducted by development team, QA testing conducted by Code 750, and UAT (user acceptance testing). This TP template provides section on test results (successes and failures) as well as follow-up actions to aid the next phase of testing.
		Code 750 does not conduct strict test plan review (TPR) as a standard; therefore it is being added to SOP.	*New Process*: TPRs does not exist in the Code 760 process structure.
Implementation phase		Currently list Implementation as a milestone (and corresponding tasks including creation of an implementation plan) on the Code 750 project schedule.	Use Code 760 Implementation Plan template.
Mgmt. Approval Process		Currently Code 750 management is provided with sparse proposals for application development efforts, but lack justification for the solution.	*New process*: As part of the Formulation process, the Code 750 Division Chief will be presented with multiple technical options (good, better, best) for new application development efforts. The intent is to ensure 1) management has more than one thoroughly researched options from which to select; and 2/ the selection option is the 'best' solution that will meet the customer's defined needs.
Reviews		Currently support project status reviews and requirements reviews. But reviews are not conducted at each phase of the project life cycle.	Adhere to all relevant review sessions within the project life cycle to include SCR, ORR, and TRR.
Change Management	D,E		
Change requests	D,E	Change requests are addressed via the Remedy system.	The Code 750 process continues to evolve. All change requests will continue to be worked with in the Change Request process via Remedy. *New process*: Change requests that grow into projects (Institutional or Reimbursable) will follow the Code 750 SOP derived from the Code 760 process.

Standard Process/Procedure *cont'd*	Level*	Code 750 Process	Code 760 Process
Incidents		Incidents are addressed with immediacy via the Remedy system. The priorities for incidents are: *Need to incorporate types of incidents*	Incidents will continue to be worked in Remedy.
Documentation and Documentation/Records Mgmt.		Code 750 recently determined that SharePoint would be the system of record for all Code 750 project documentation.	Code 760 documentation and presentations submitted for formal review are tracked in a Review Tracking Database (File Manager) by the Network Configuration Management Team (NCMT). *New process*: SharePoint will be the database of record for all Code 750 project documentation. The current site will be enhanced to support an organized structure for documents. The SharePoint site will be managed by the Configuration Manager.
		Code 750 currently submits the development cost estimate/LOE to the Division Chief for project approval.	*New process*: The PTP (Project Task Plan) will be submitted as the cover sheet when presenting the highlights of the initiative to management for consideration. The PTP has been modified to fit Code 750. A sample of the PTP template is in Appendix E.
		Presently Code 750 does not utilize a formal test plan structure for preliminary and detailed design.	*New process*: Code 750 will direct its development staff to utilize the PDD and DDD on a case by case basis to document the specifics of an application design.
		Code 750 requires that a test plan be produced for full life cycle projects. But the current test plan does not adequately detail test results.	*New process*: Code 750 will direct its development staff to utilize the TP (test plan) template to document the test strategy more explicitly and advise of test results. A sample of the template is in Appendix E.
Engineering Change (EC)		Code 750 will not manage **ECs** (engineering changes) but has defined Service Requests (SR) as part of the process.	There will be no process in Code 750 to accommodate engineering changes.

*'Level' refers to the *Project/Task Categories* defined by Code 760

Appendix G. Code 750 Project Schedule Template

Task Name
PROJECT NAME
FORMULATION Phase
Host concept meeting with Customer
Strategize software development methodology
Develop technical solution to business need
Initiate Change Request (CR)
Create project schedule
Submit High Level Development Cost Estimate/LOE
Document proposed solutions/rqmts. in RQD (or BCAR) and affix to PTP
Introduce project at CAB (re-introduce if new rqmts. impacts estimate/LOE)
Signoff on Routing Sheet (Code 750 team members briefed on project)
Code 750 Mgmt. Approval and Customer Signoff on PTP/RQD (or BCAR)
Conduct Project Kickoff meeting
Upload Project Documentation to AD SharePoint
REQUIREMENTS ANALYSIS Phase
Capture Customer Requirements in RTM (recurring task)
Analyze Customer Requirements (recurring task through rqmts. capture sessions)
Define Security Requirements (if applicable)
Baseline Requirements
Code 750 Mgmt. Approval and Customer Signoff (as result of revised budget, scope or implementation date change)
Rebaseline Requirements (if necessary)
Update Project Schedule (if necessary)
Conduct Milestone Review
DESIGN Phase
Develop Privacy Impact Assessment (ITPA/PIA) & NF 1748 (only for new apps)
Register Application in STRAW & System Inventory (only for new apps)
Request DEV and TEST environments (only for new apps)

Application Database Design
Design Application Database
Create Logical Database Schema/ Data Model
Develop Prototypes, Storyboards for Customer Review
Conduct Design Review (this is recurring weekly during design)
Create Physical Database
Set up CM
Review preliminary design with Section 508 Tester (compliance test)
Conduct Milestone Review
DEVELOPMENT Phase
Develop Code & Unit Test
Develop Framework
Develop Module 1 (based on number of modules in application)
Conduct Code / Unit Testing
Modify/fix code based on unit test results
Conduct Milestone Review
TESTING Phase
Request eAuth Setup (for LaunchPad) in TEST Environment
Discuss Approach for Test Plan
Test Plan
Develop Test Plan
System Integration Test (SIT)
Conduct SI testing and fix issues identified in SIT
Move code/database to TEST region
Test eAuth in TEST region
Request Security Source Code Scan (request made in parallel with SIT)
Code 750 Government Testing
Review test results from SIT; update test plan accordingly
Conduct Section 508 Test (final check)
Fix any issues identified in 508 test and retest
Perform Code 750 Quality Assurance Test
Correct code identified in QA Test

Conduct Test Readiness Review (TRR) - equates to Milestone Review
Perform User Acceptance Test
Fix issues identified in UAT
IMPLEMENTATION Phase
Create NAMS Workflow & NAMS User List
Request Virtual URL
Implementation Plan
Develop Implementation Plan
Update CR for PROD Implementation (DC notification)
CM Baseline Audit
Conduct Operations Readiness Review (ORR) - ~ 1 week prior to implementation
Move Database/Code to Production
POST-IMPLEMENTATION Phase
Lesson Learned Meeting (occurs ~30 days following implementation)